

Rural Communities and the Transportation and Climate Initiative

Reducing Pollution, Improving the Quality of Life, Stimulating Local Economies

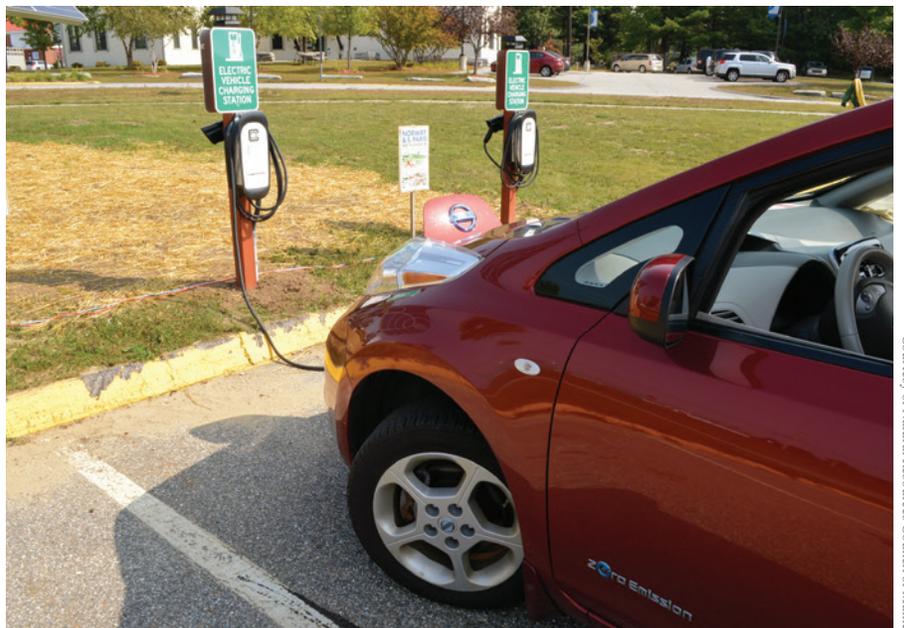
HIGHLIGHTS

For Northeastern and mid-Atlantic states, the Transportation and Climate Initiative presents a crucial opportunity to move toward a modern, less polluting, and more resilient transportation future. Rural communities can benefit tremendously from the initiative's new transportation investments if they have both strong input in designing policies to meet their transportation challenges and paths to advocate for their vision of clean, modern transportation solutions.

Under a bipartisan regional initiative, rural communities in the Northeast and mid-Atlantic region have an opportunity to build a transportation future that reduces costs, increases transportation options, and leads to an economy that is more resilient in the face of climate change. The Transportation and Climate Initiative (TCI) “seeks to improve transportation, develop the clean energy economy and reduce carbon emissions from the transportation sector” (TCI n.d.). Participating are Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia. A final Memorandum of Understanding is expected by the end of 2020, with implementation slated for early 2022.

When implemented, the TCI program would reduce transportation pollution by placing a limit on total emissions from cars and trucks and requiring regional fuel distributors to pay into a fund based on the amount of gasoline and diesel they sell. The initiative would generate billions of dollars that states and communities throughout the region could invest in clean transportation options. To be most effective, the TCI must offer transportation solutions for *all* types of communities, including rural areas, where residents drive more miles by car and have fewer alternative ways to get where they need to go (McGuckin and Fucci 2018).

Initial TCI modeling estimates that communities across the Northeast and mid-Atlantic region could see a total investment of \$68 billion during the first



Courtesy of Natural Resources Council of Maine

An electric vehicle charges in a parking lot in South Paris, Maine, about an hour north of Portland. Expanding vehicle charging infrastructure is critical to ensuring that rural drivers, who log longer average vehicle trips than urban drivers, can have cleaner transportation options.

10 years of the program (Kurman-Faber 2019). Drawing on these funds, the TCI could help revitalize the region’s rural communities. Investments in clean transportation solutions designed to reduce pollution, improve the rural quality of life, and stimulate rural economies could:

- Increase access to and affordability of electric cars and trucks (Gatti 2018);
- Increase opportunities and transportation options for vulnerable and isolated rural populations, such as the elderly, youth, and people with disabilities;
- Improve mobility and opportunities for those who need better access to jobs, training, and education;
- Help communities invest in safer, more resilient roads and bridges and become more walkable and bikeable; and
- Increase high-speed Internet connectivity for remote areas.

TCI states have begun reaching out to rural communities to get ideas and input on improving transportation systems. This is essential to ensuring that rural communities underserved by public transportation receive a fair share of the initiative’s investments. The states should commit to a package of actions that would most effectively reduce emissions in rural areas and meet key rural transportation needs.

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Potential Funding from the TCI

The Transportation and Climate Initiative has the potential to generate large-scale investment in clean transportation solutions in rural areas in the Northeast and mid-Atlantic region, with rural populations ranging from more than 60 percent in Maine and Vermont to less than 10 percent in New Jersey, Massachusetts, and Rhode Island (see the table) (USCB 2010).

Based on recent modeling conducted for the initiative, the program would significantly increase overall funding for

Potential TCI-Funded Investments, by State (total over 10 years)

State	Total TCI Proceeds	Rural Share of Population
Connecticut	\$3 billion	12.0%
Delaware	\$900 million	16.7%
District of Columbia	\$230 million	0.0%
Massachusetts	\$6.3 billion	8.0%
Maryland	\$5.5 billion	12.8%
Maine	\$1.8 billion	61.3%
New Hampshire	\$1.3 billion	39.7%
New Jersey	\$11.5 billion	5.3%
New York	\$14.9 billion	12.1%
Pennsylvania	\$12 billion	21.3%
Rhode Island	\$765 million	9.3%
Vermont	\$666 million	61.1%
Virginia	\$9.3 billion	24.5%

The TCI has the potential to generate large-scale investments in clean transportation solutions in rural areas.

SOURCES: KURMAN-FABER 2019 (TOTAL PROCEEDS); USCB 2010 (RURAL SHARE OF POPULATION).

clean transportation (Kurman-Faber 2019). For example, Vermont currently allocates about \$1.1 million in incentive programs for electric vehicles (EVs) and Maine allocates about \$2.25 million (Drive Electric Vermont 2020; Efficiency Maine 2020). The TCI could multiply those investments more than tenfold.

Drawing on TCI funds, the initiative represents an opportunity for rural areas to build transportation systems that yield benefits in three areas: saving money for consumers in transitioning to electric vehicles, expanding transportation options, and protecting communities from the transportation challenges posed by climate change.

Helping Rural Drivers Transition to Clean Vehicles

The transition to EVs and other clean vehicle technologies will benefit consumers everywhere, promising lower operating and maintenance costs, along with reduced pollution and a cleaner environment. That said, the potential gains from switching to EVs are especially significant for rural areas (Gatti 2018). Rural drivers travel farther than their urban or suburban counterparts for work, school, shopping, and doctor

visits. They need to repair their vehicles more frequently, and spend more money on gasoline, while also producing more carbon emissions per capita (ACEEE 2018; Hawk 2013). Rural residents in the Northeast and mid-Atlantic region log more than 13,000 miles of driving each year—more than 20 percent above the regional average. Overall, they could save up to twice as much as urban residents per capita by switching from an internal combustion engine car to an EV, according to a Union of Concerned Scientists (UCS) analysis (Gatti 2018).

However, rural drivers face unique challenges around purchasing EVs. These include their longer average driving distances, greater preference and need for pickup trucks, and special concerns about performance in cold weather. Rural households also have a lower median income than urban households (Bishaw and Kirby 2016). To increase the growth of EV sales in rural areas and address these challenges, states in the Northeast and mid-Atlantic must take a proactive approach.

Fortunately, the purchase price of EVs, once significantly higher than that of equivalent gasoline vehicles, is falling fast. Many new makes and models are now available at competitive prices, with battery ranges long enough to serve even the most rural drivers and operate in the coldest temperatures (NAF 2020; Reichmuth 2016). Rural residents are also well-positioned to benefit from home charging: more than 70 percent of them own their homes (HAC 2010). With electric pickup trucks, SUVs, and other all-wheel-drive vehicles coming online, EVs can be a solution for all communities (Markus 2020). According to another recent UCS report, “signals in policy, technology, and the market suggest that widespread electrification of cars, SUVs, and light pickup trucks is possible” (O’Dea 2019).

To help rural residents transition to EVs, TCI states should consider a variety of investments:

- **Offer higher purchase incentives and other financial assistance for low- and moderate-income drivers.** In addition to offering subsidies and rebates, states can establish vehicle retirement programs. These can help rural drivers take the most inefficient vehicles off the road, saving the owners money on fuel and maintenance. States should also consider increasing the support they offer to buyers of electric work vehicles, including pickups and SUVs, which will be important for small business owners and rural drivers.
- **Provide rural residents with ample options for refueling.** For example, states can facilitate the building of rural public charging stations and implement programs that facilitate charging at home.
- **Support grassroots education, outreach, and marketing efforts for EVs.** Through group purchasing programs,

local community organizations can facilitate sales of EVs and charging equipment, reduce up-front purchase costs, and help consumers address the complex decisions involved in EV purchases.

Expanding Transportation Options for Rural Communities

Access to a personal vehicle is vital in a rural environment. According to the National Household Travel Survey, 92 percent of rural commuters use a personal vehicle to get to work (McGuckin and Fucci 2018).

Dependence on personal vehicles has major consequences for those who cannot drive or afford a car. For elderly residents and residents with disabilities, who make up a growing share of rural communities, a lack of transportation choices can limit opportunities to work, take part in education programs, socialize, or even get to important medical appointments. TCI investments, together with other initiatives and sources of funding, could dramatically improve rural transportation options in a number of ways:

- **Increase funding to improve and electrify public transportation services.** Public transportation services run by regional transit authorities and serving rural areas represent a critical lifeline for many rural residents. However, these services are chronically underfunded. Increased funding could make service to rural communities in the Northeast and mid-Atlantic more available and reliable.
- **Stimulate the creation and growth of vanpools.** California uses funds from its cap-and-invest program, an economy-wide initiative for controlling pollution, to



Brandy Pelletier/Pioneer Valley Transit Authority

Pioneer Valley Transit Authority, which serves western Massachusetts residents, added electric buses to its fleet in 2016. Electric buses have lower operating costs and reduce air pollution in the communities they serve.

provide vanpool service for agricultural workers in the San Joaquin Valley (CARB 2018). Similar programs in TCI states could help rural workers connect to jobs and other opportunities without the need to own personal vehicles.

- **Scale up paratransit services.** These door-to-door, individualized services offer a critical transportation lifeline for rural residents, particularly the elderly and people with disabilities. Paratransit enables them to get to medical appointments, social activities, shopping, and more.
- **Improve broadband service.** Telecommuting, Internet shopping, and other online services can provide an alternative to physical mobility for certain daily life and work needs. However, many rural communities lack adequate infrastructure for connecting to these services. Improving the rural broadband infrastructure can help people access essential tools and cut down on unnecessary travel (Dickes, Lamie, and Whitacre 2010).

Building Climate-Resilient Transportation Infrastructure

In 2011, rural communities throughout the Northeast and mid-Atlantic got a preview of how a warming climate will affect rural transportation. Over two days, Tropical Storm Irene dumped up to 11 inches of rain throughout New England and damaged thousands of miles of roads from Vermont all the way to Virginia. In Vermont alone, the storm damaged more than 2,000 sections of roads, washed out nearly 300 bridges, and blew out more than 900 of the culverts beneath roads that protect natural ecosystems and allow water to flow without disrupting transportation (GCC 2013). Irene stranded the residents of 13 Vermont communities for days and even weeks; supplies had to be delivered by helicopter.

The science is clear: the Northeast and mid-Atlantic will experience increasingly intense storms as a result of a changing climate. According to the National Climate Assessment, the Eastern United States has already experienced a 50 percent increase in extreme rainfall events since the middle of the 20th century (GCRP 2017). We need to do more to protect our communities from climate change, while also taking aggressive steps to reduce global warming emissions.

Adapting rural transportation infrastructure to fit the needs of a changing climate will require considerable

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investment. And as the COVID-19 pandemic has shown, it is more important than ever to ensure we have clean air to breathe and sustainable ways to get around. The TCI represents one source of funding for this crucial work. Rural communities can benefit tremendously from new transportation investments, but they must have ample opportunity to participate in the policy design to help clarify their transportation challenges and advocate for their vision for clean, modern transportation solutions.

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